No. 8300008

THE UNITED STATES OF AMERICA

TO ALL TO WHOM THESE PRESENTS SHALL COME:

Petoseed Co., Inc.

Whereas, THERE HAS BEEN PRESENTED TO THE

Secretary of Agriculture

AN APPLICATION REQUESTING A CERTIFICATE OF PROTECTION FOR AN ALLEGED NOVEL VARIETY OF SEXUALLY REPRODUCED PLANT, THE NAME AND DESCRIPTION OF WHICH ARE CONTAINED IN THE APPLICATION AND EXHIBITS, A COPY OF WHICH IS HEREUNTO ANNEXED AND MADE A PART HEREOF, AND THE VARIOUS REQUIREMENTS OF LAW IN SUCH CASES MADE AND PROVIDED HAVE BEEN COMPLIED WITH, AND THE TITLE THERETO IS, FROM THE RECORDS OF THE PLANT VARIETY PROTECTION OFFICE, IN THE APPLICANT(S) INDICATED IN THE SAID COPY, AND WHEREAS, UPON DUE EXAMINATION MADE, THE SAID APPLICANT(S) IS (ARE) ADJUDGED TO BE ENTITLED TO A CERTIFICATE OF PLANT VARIETY PROTECTION UNDER THE LAW.

NOW, THEREFORE, THIS CERTIFICATE OF PLANT VARIETY PROTECTION IS TO GRANT UNTO THE SAID APPLICANT(S) AND THE SUCCESSORS, HEIRS OR ASSIGNS OF THE SAID APPLICANT(S) FOR THE TERM OF eighteen YEARS FROM THE DATE OF THIS GRANT, SUBJECT TO THE PAYMENT OF THE REQUIRED FEES AND PERIODIC REPLENISHMENT OF VIABLE BASIC SEED OF THE VARIETY IN A PUBLIC REPOSITORY AS PROVIDED BY LAW, THE RIGHT TO EXCLUDE OTHERS FROM SELLING THE VARIETY, OR OFFERING IT FOR SALE, OR REPRODUCING IT, OR IMPORTING IT, OR EXPORTING IT, OR USING IT IN PRODUCING A HYBRID OR DIFFERENT ETY THEREFROM, TO THE EXTENT PROVIDED BY THE PLANT VARIETY PROTECTION ACT T. 1542, AS AMENDED, 7 U.S.C. 2321 ET SEQ.)

TOMATO

'Peto 460'

In Testimony Whereof, *I have hereunto set my hand and caused the seal of the* Plant Variety Protection Office *to be affixed at the City of* Washington *this* 26th *day of* July *in the year of our Lord one thousand nine hundred and* eighty-five.

Attest:

Kenneth W. Evans
Commissioner
Plant Variety Protection Office
Agricultural Marketing Service

John R. Block
Secretary of Agriculture

U.S. DEPARTMENT OF AGRICULTURE
AGRICULTURAL MARKETING SERVICE
LIVESTOCK, MEAT, GRAIN & SEED DIVISION

APPLICATION FOR PLANT VARIETY PROTECTION CERTIFICATE

(Instructions on reverse)

FORM APPROVED: OMB NO. 0581-0005

No certificate for plant variety protection may be issued unless a completed application form has been received (5 U.S.C. 553).

1. NAME OF APPLICANT(S)	2. TEMPORARY DESIGNATION	3. VARIETY NAME
Petoseed Co., In.	Peto 460	Peto 460

4. ADDRESS *(Street and No. or R.F.D. No., City, State, and Zip Code)*	5. PHONE *(Include area code)*	FOR OFFICIAL USE ONLY
P. O. Box 4206 Saticoy, CA 93004	805-647-1188	PVPO NUMBER **8300008**

6. GENUS AND SPECIES NAME	7. FAMILY NAME *(Botanical)*	FILING DATE	FILING TIME
Lycopersicum esculentum	Solanaceae	10/27/82	3:00 ☐ A.M. ☒ P.M.

8. KIND NAME	9. DATE OF DETERMINATION	FEES RECEIVED
Tomato	September 15, 1982	AMOUNT FOR FILING $ 500.00 DATE 10/27/82 AMOUNT FOR CERTIFICATE $ 250.00 DATE 7/9/85

10. IF THE APPLICANT NAMED IS NOT A "PERSON," GIVE FORM OF ORGANIZATION *(Corporation, partnership, association, etc.)*

corporation

11. IF INCORPORATED, GIVE STATE OF INCORPORATION	12. DATE OF INCORPORATION
California	1962

13. NAME AND ADDRESS OF APPLICANT REPRESENATIVE(S), IF ANY, TO SERVE IN THIS APPLICATION AND RECEIVE ALL PAPERS

Paul Thomas, Director of Research, Petoseed Co., Inc.
Rt.4, Box 1255
Woodland, CA 95695

916-666-0931

14. CHECK APPROPRIATE BOX FOR EACH ATTACHMENT SUBMITTED

a. ☒ Exhibit A, Origin and Breeding History of the Variety *(See Section 52 of the Plant Variety Protection Act.)*

b. ☒ Exhibit B, Novelty Statement

c. ☒ Exhibit C, Objective Description of the Variety *(Request form from Plant Variety Protection Office.)*

d. ☒ Exhibit D, Additional Description of the Variety

15. DOES THE APPLICANT(S) SPECIFY THAT SEED OF THIS VARIETY BE SOLD BY VARIETY NAME ONLY AS A CLASS OF CERTIFIED SEED? *(See Section 83(a) of the Plant Variety Protection Act.)*

☐ Yes *(If "Yes," answer items 16 and 17 below)* ☒ No

16. DOES THE APPLICANT(S) SPECIFY THAT THIS VARIETY BE LIMITED AS TO NUMBER OF GENERATIONS?

☐ Yes ☒ No

17. IF "YES" TO ITEM 16, WHICH CLASSES OF PRODUCTION BEYOND BREEDER SEED?

☐ Foundation ☐ Registered ☐ Certified

18. DID THE APPLICANT(S) FILE FOR PROTECTION OF THE VARIETY IN THE U.S. OR OTHER COUNTRIES?

☐ Yes *(If "Yes," give names of countries and dates)*

☒ No

19. HAVE RIGHTS BEEN GRANTED IN THE U.S. OR OTHER COUNTRIES?

☐ Yes *(If "Yes," give names of countries and dates)*

☒ No

20. The applicant(s) declare(s) that a viable sample of basic seeds of this variety will be furnished with the application and will be replenished upon request in accordance with such regulations as may be applicable.

The undersigned applicant(s) is (are) the owner(s) of this sexually reproduced novel plant variety, and believe(s) that the variety is distinct, uniform, and stable as required in Section 41, and is entitled to protection under the provisions of Section 42 of the Plant Variety Protection Act.

Applicant(s) is (are) informed that false representation herein can jeopardize protection and result in penalties.

SIGNATURE OF APPLICANT	DATE
Paul Thomas	10/22/82
SIGNATURE OF APPLICANT	DATE

14A ORIGIN AND BREEDING HISTORY OF PETO 460

The cultivar Peto 460 was judged to be a true breeding line with merit for processing during the fall of 1981. Peto 460 was developed by Jack Hanna with support from other research workers at the Petoseed Research Center, Woodland, California.

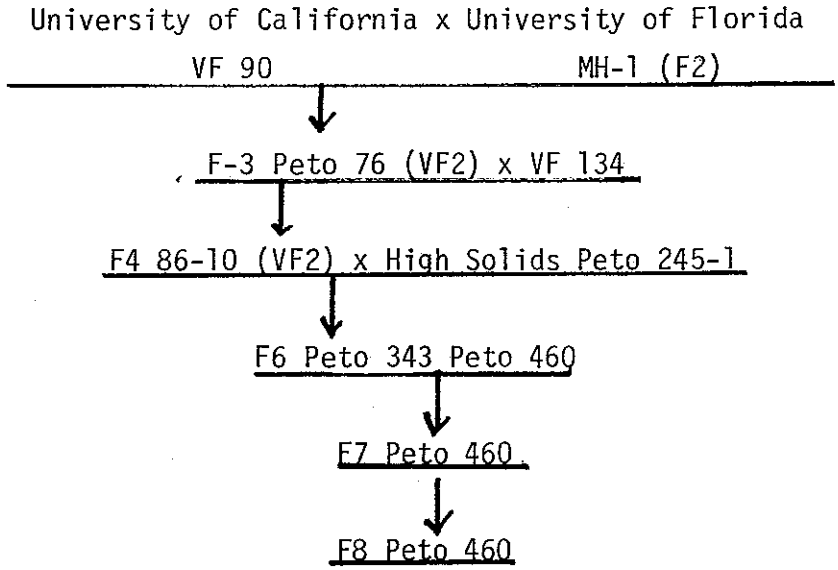
Large numbers of selections in the F-2 and following progeny from the cross $F_3$264 x 245-1 were selected for quality, including viscosity, firmness and solids. Progeny were selected for resistance to Fusarium Race II (Fusarium oxysporium f. lycopersici) and Verticillium Wilt Race I (Verticillium alboatrium). The true breeding line Peto 460 is homozygous resistant to Fusarium Race II and Verticillium Race I.

Plant characteristics were evaluated for adaptability to mechanical harvest in each generation. Plants with more ideal characteristics for mechanical harvest were saved in each generation. Trial plantings of Peto 460 during 1981 showed the cultivar to have excellent mechanical harvest characteristics. The fruit separates from the vine without excessive shaking and the firm fruit do not show mechanical damage.

Breeding work was all conducted on facilities owned and operated by Petoseed Co., Inc. in Woodland, California, Saticoy, California and Santiago, Chile.

14A ORIGIN AND BREEDING HISTORY OF PETO 460 (CONT'D.)

The basic pedigree of Peto 460 is as follows:



In 1980 a large number of single plant selections were observed and Peto 460 was determined to have outstanding solids and a very productive plant. Evaluation of Peto 460 was continued in the 1981 Petoseed trials. Fusarium Race II resistance was determined from the F-7 Peto 460 and found to be 100% resistant to Fusarium Race II. F-8 Peto 460 was planted in Petoseed controlled trials in California during 1982.

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December 15, 1982

SUBJECT: TOMATO APPLICATION NO. 8300008 - PETO 460

Addition to Exhibit A - December 15, 1982

No variation has been found in Peto 460 for off-type or other plant variation when grown under normal field conditions.

14B PETO 460

Peto 460 is a novel tomato for processing using mechanical or hand harvest.

Peto 460 most closely resembles the tomato variety VF 134-1-2. The plant habit and fruit setting characteristics of Peto 460 are similar but differe from VF 134-1-2 in that Peto 460 has more concentrated maturity under a wider range of cultural conditions.

Peto 460 is resistant to Fusarium Wilt (Fusarium oxysporium f. lycopersici) Race I and Race II and differs from VF 134-1-2, Murrieta and UC82 that have resistance to Fusarium Wilt Race I (Fusarium oxysporium f. lycopersici).

Peto 460 is a novel tomato for processing developed by conventional plant breeding methods, including the combining of parental types and subsequent selection to produce a unique combination of characteristics.

Quality studies of Peto 460 was determined by obtaining paired samples from a number of locations in California during 1982. Quality studies for color, soluble solids, pH and viscosity of pulped samples were determined.

The results of quality studies during 1982 show the following:

1. Viscosity of pulped fruit is higher than the cultivar VF 145-7879 and similar to UC 82.
2. Soluble solids is similar to VF 145-7879 and higher than UC 82, Peto 94C and Peto 95-43.
3. pH is in the acceptable range for processing and similar to the cultivars VF 145-7879 and UC 82.
4. Color of Peto 460 is very good and equal to VF 145-7879 and UC 82.
5. Fruit are firm and not cracked or broken during mechanical harvest.

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14B PETO 460 (CONT'D.)

The general field performance of Peto 460 is as follows:

1. Seedlings become rapidly established in direct seeded fields under cultural practices for mechanical harvest.
2. Fruit set of the plants produces a concentrated set of fruit for mechanical harvest with yields above the varieties VF 145-7879 and UC 82.
3. Plant characteristics including size are well adapted for mechanical harvest. The fruit are readily removed from the vine without excessive shaking and mechanical damage is very minimal.

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December 15, 1982

SUBJECT: TOMATO APPLICATION NO. 8300008 - PETO 460

Addition to Exhibit B - December 15, 1982

The disease resistance of comparison varieties are as follows:

VARIETY	FUSARIUM RACE I	FUSARIUM RACE II
VF 134-1-2	resistant	susceptible
Murrieta	resistant	susceptible
UC 82	resistant	susceptible
Peto 460	resistant	resistant

FORM APPROVED: OMB NO. 0581-0055

EXHIBIT C
(Tomato)

U.S. DEPARTMENT OF AGRICULTURE
AGRICULTURAL MARKETING SERVICE
LIVESTOCK, MEAT, GRAIN AND SEED DIVISION
PLANT VARIETY PROTECTION OFFICE
BELTSVILLE, MARYLAND 20705

OBJECTIVE DESCRIPTION OF VARIETY

TOMATO *(Lycopersicon esculentum* Mill.)

NAME OF APPLICANT(S)	TEMPORARY DESIGNATION	VARIETY NAME
Petoseed Co., Inc.	Peto 460	PETO 460 3/17/83

ADDRESS *(Street and No., or R.F.D. No., City, State, and Zip Code)*
Rt. 4, Box 1255
Woodland, CA 95695

FOR OFFICIAL USE ONLY

PVPO NUMBER

8300008

Choose responses for the following characters which best fit your variety. Complete this form as fully as possible for best characterization of the variety. When a single quantitative value is requested (e.g., fruit weight), your answer should be the mean of an adequate-sized, unbiased sample of plants. Use leading zeroes when necessary (e.g., [0][9] or [0][8][1], etc.). The applicant variety should be compared with at least one well-known standard check variety of the same type (see list of recommended check varieties below), and grown in the same trials. The characters on this form should be described from plants grown under normal conditions of culture for the variety. Indicate by a check whether trial data are from greenhouse _____ or field XX plantings. Trials direct-seeded XX or transplanted _____; staked _____ or unstaked _____. Give locations and dates of seeding and transplanting here: April 15, 1981, Woodland, CA; April 1, 1982, May 15, 1982, June 5, 1982, Woodland, California and areas in California

COMPARISONS SHOULD BE MADE TO ONE OR MORE CHECK VARIETIES IN THE FOLLOWING LIST, IF AT ALL POSSIBLE. ENTER THE NUMBER OF THE CHECK IN BOXES WHERE IDENTITY OF CHECK IS REQUESTED.

1 = Ace 55 VF
2 = Campbell 37
3 = Chico III
4 = Flora Dade
5 = Florida MH-1
6 = Heinz 1350
7 = Homestead 24
8 = Marglobe
9 = Murietta
10 = New Yorker
11 = Ohio MR-13
12 = Red Cherry Large
13 = Red Rock
14 = Roma VF
15 = Rutgers
16 = Sunray
17 = Tropic
18 = UC 82
19 = VF 134
20 = US 28
21 = VF 145 B 7879
22 = Other *(Specify)* _____

1. SEEDLING:

[2] Anthocyanin in hypocotyl of 2-15 cm. seedling: 1 = Absent 2 = Present

[1] Habit of 3-4 week old seedling: 1 = Normal 2 = Compact

2. MATURE PLANT (at maximum vegetative development):

[ ][3][7] Cm. Height

[2] Growth: 1 = Indeterminate 2 = Determinate

[2] Form: 1 = Lax, open 2 = Normal 3 = Compact 4 = Dwarf 5 = Brachytic

[3] Size of canopy (compared to others of similar type): 1 = Small 2 = Medium 3 = Large

[2] Habit: 1 = Sprawling (decumbent) 2 = Semi-erect 3 = Erect ('Dwarf Champion')

3. STEM:

[2] Branching: 1 = Sparse ('Brehm's Solid Red', 'Fireball') 2 = Intermediate ('Westover') 3 = Profuse ('UC 82')

[2] Branching at cotyledonary or first leafy node: 1 = Present 2 = Absent

[2] No. of nodes below the first inflorescence: 1 = 1-4 2 = 4-7 3 = 7-10 4 = 10 or more

[2] No. of nodes between early (1st - 2nd, 2nd - 3rd) inflorescences.

[0-2] No. of nodes between later-developing inflorescences.

[3] Pubescence on younger stems: 1 = Smooth (no long hairs) 2 = Sparsely hairy (scattered long hairs) 3 = Moderately hairy 4 = Densely hairy or wooly

4. LEAF (mature leaf beneath the 3rd inflorescence):

[1] Type: 1 = Tomato 2 = Potato ('Trip-L-Crop')

[2] Morphology *(choose illustration on pg. 5 of this form that is most similar)*

[2] Margins of major leaflets: 1 = Nearly entire 2 = Shallowly toothed or scalloped 3 = Deeply toothed or cut, esp. towards base

[2] Marginal rolling or wiltiness: 1 = Absent 2 = Slight 3 = Moderate 4 = Strong

[3] Onset of leaflet rolling: 1 = Early-season 2 = Mid-season 3 = Late season

8

4. LEAF (mature leaf beneath the 3rd inflorescence -- continued):

[1] Surface of major leaflets: 1 = Smooth 2 = Rugose (bumpy or veiny)

[2] Pubescence: 1 = Smooth (no long hairs) 2 = Normal 3 = Hirsute 4 = Wooly

5. INFLORESCENCE (make observations on 3rd inflorescence):

[2] Type: 1 = Simple 2 = Forked (2 major axes) 3 = Compound (much branched)

[7] Number of flowers in inflorescence, average

[1] Leafy or "running" inflorescences: 1 = Absent 2 = Occasional 3 = Frequent

6. FLOWER:

[1] Calyx: 1 = Normal, lobes awl-shaped 2 = Macrocalyx, lobes large, leaflike 3 = Fleshy

[2] Calyx-lobes: 1 = Shorter than corolla 2 = Approx. equalling corolla 3 = Distinctly longer than corolla

[1] Corolla color: 1 = Yellow 2 = Old gold 3 = White or tan

[2] Style pubescence: 1 = Absent 2 = Sparse 3 = Dense

[1] Anthers: 1 = All fused into tube 2 = Separating into 2 or more groups at anthesis

[1] Fasciation (1st flower of 2nd or 3rd inflorescence): 1 = Absent 2 = Occasionally present 3 = Frequently present

7. FRUIT (3rd fruit of 2nd or 3rd cluster): *For the first 5 characters below, match your variety with the most similar illustration on pg. 5 of this form.*

[10] Typical fruit shape:

[3] Shape of transverse section:

[1] Shape of stem end:

[2] Shape of blossom end:

[1] Shape of pistil scar:

---

[1] Abscission layer: 1 = Present (pedicellate) 2 = Absent (jointless)

[2] Point of detachment of fruit at harvest: 1 = At pedicel joint 2 = At calyx attachment

[10] mm length of pedicel (from joint to calyx attachment)

[62] mm length of mature fruit (stem axis)	[64] mm length, check var. no.	[19]
[56] mm diameter of fruit at widest point	[58] mm diameter, check var. no.	[19]
[73] g weight of mature fruit	[79] g weight, check var. no.	[19]

[1] No. of locules: 1 = Two 2 = Three and four 3 = Five or more (actual 2-3)

[1] Fruit surface: 1 = Smooth 2 = Slightly rough 3 = Moderately rough or ribbed

[1] Fruit base color (mature-green stage): 1 = Light green ('Lanai', 'VF145-F5') 2 = Light gray-green ('Westover') 3 = Apple or medium green ('Heinz 1439 VF') 4 = Yellow green 5 = Dark green

[1] Fruit pattern (mature-green stage): 1 = Uniform green 2 = Green-shouldered 3 = Radial stripes on sides of fruit

[ ] Shoulder color if different from base: 1 = Dark green 2 = Grey green 3 = Yellow green

[5] Fruit color, full-ripe: 1 = White 2 = Yellow 3 = Orange 4 = Pink 5 = Red 6 = Brownish 7 = Greenish 8 = Other *(Specify)* _____

[3] Flesh color, full-ripe: 1 = Yellow 2 = Pink 3 = Red/Crimson 4 = Orange 5 = Other *(Specify)* _____

[1] Flesh color: 1 = Uniform 2 = With lighter and darker areas in walls

[3] Locular gel color of table-ripe fruit: 1 = Green 2 = Yellow 3 = Red

[2] Ripening: 1 = Blossom-to-stem end 2 = Uniform

7. FRUIT (3rd fruit of 2nd or 3rd cluster): Continued

[2] Ripening: 1 = Inside out 2 = Uniformly 3 = Outside in

[2] Epidermis color: 1 = Colorless 2 = Yellow

[1] Epidermis: 1 = Normal 2 = Easy-peel

[2] Epidermis texture: 1 = Tender 2 = Average 3 = Tough

[3] Thickness of pericarp . . . . . [3]

1 = Under 3 mm 2 = 3-6 mm 3 = 6-9 mm 4 = Over 9 mm

Thickness of pericarp, check var. no. [1][9]

[1] Stem scar size: 1 = Small ('Roma') 2 = Medium ('Rutgers') 3 = Large

[1] Core: 1 = Coreless (absent or smaller than 6x6 mm) 2 = Present

8. RESISTANCE TO FRUIT DISORDERS (Use code: 0 = Unknown, 1 = Susceptible, 2 = Resistant)

[0] Blossom end rot
[0] Blotchy ripening
[2] Bursting
[2] Catface
[2] Cracking, concentric
[2] Cracking, radial
[0] Fruit pox
[0] Gold fleck
[0] Graywall
[2] Zippering
[ ] Other *(Specify)* _____

9. DISEASE AND PEST REACTION (Use code: 0 = Not tested, 1 = Susceptible, 2 = Resistant). NOTE: If claim of novelty is based wholly or in substantia part upon disease resistance, trial data should be appended. These should specify the method of testing, the reaction of the application variety, and reaction of well-known check varieties grown in the trial (identified by name).

VIRAL DISEASES:

[0] Cucumber mosaic
[0] Curly top
[0] Potato-Y virus
[ ] Other virus *(Specify)* _____
[1] Tobacco mosaic, Race 0
[1] Tobacco mosaic, Race 1
[1] Tobacco mosaic, Race 2
[1] Tobacco mosaic, Race 2[2]
[0] Tomato spotted wilt
[0] Tomato yellows

BACTERIAL DISEASES:

[0] Bacterial canker *(Corynebacterium michiganense)*
[0] Bacterial soft rot *(Erwinia carotovora)*
[1] Bacterial speck *(Pseudomonas tomato)*
[1] Bacterial spot *(Xanthomonas vesicatorium)*
[0] Bacterial wilt, *(Pseudomonas solanacearum)*
[0] Other bacterial disease *(Specify)* _____

FUNGAL DISEASES:

[0] Anthracnose *(Colletotrichum* spp.*)*
[0] Brown root rot or corky root, *(Pyrenochaeta lycopersici)*
[0] Collar rot or stem canker, *(Alternaria solani)*
[0] Early blight defoliation, *(Alternaria solani)*
[2] Fusarium wilt, Race 1, *(F. oxysporum f. lycopersici)*
[2] Fusarium wilt, Race 2
[0] Fusarium wilt, Race 3
[0] Gray leaf spot *(Stemphylium* spp.*)*
[0] Late blight, Race 0, *(Phytophthora infestans)*
[0] Late blight, Race 1
[0] Leaf mold, Race 1 *(Cladosporium fulvum)*
[0] Leaf mold, Race 2
[0] Leaf mold, Race 3
[0] Leaf mold, other races *(Specify)* _____
[0] Nailhead spot *(Alternaria tomato)*
[0] Septoria leafspot *(S. lycopersici)*
[0] Target leafspot *(Corynespora casiicola)*
[2] Verticillium wilt, Race 1 *(V. albo-atrum)*
[0] Verticillium wilt, Race 2
[0] Other fungal disease _____
[0] Other fungal disease _____

9. DISEASE AND PEST REACTION (Use code: 0 = Not tested, 1 = Susceptible, 2 = Resistant -- Continued)

INSECTS AND PESTS:

[0]	Colorado potato beetle *(Leptinotarsa decemlineata)*	[0]	Tomato hornworm *(Manduca quinquemaculata)*
[0]	Southern root knot nematode *(Meloidogyne incognita)*	[0]	Tomato fruitworm *(Heliothis zea)*
[0]	Spider mites *(Tetranychus spp.)*	[0]	Whitefly *(Trialeurodes vaporariorum)*
[0]	Sugar beet army worm *(Spodoptera exigua)*	[0]	Other *(Specify)* _____
[0]	Tobacco flea beetle *(Epitrix hirtipennis)*		_____

POLLUTANTS:

[0]	Ozone	[0]	Sulfur dioxide	[0]	Other *(Specify)* _____

10. CHEMISTRY AND COMPOSITION OF FULL-RIPE FRUITS: Suggested test methods may be found in "Tomato Products," 5th ed., National Canners Assn. Bull. 27-L. Please specify test methods or give a reference to methods used. Fill in table below with values for the new variety and for at least one well-known check variety of similar type grown in the same trial. Specify names or numbers of check varieties.

	SUBMITTED VARIETY	Check Variety VF134-1-2	Check Variety VF145B-7879	Check Variety UC82
pH Orion Analog pH Model 1301	4.25	4.15	4.25	4.25
Titratable acidity, as % citric	not tested			
Total solids (dry matter, seeds and skin removed)	not tested			
Soluble solids, as °Brix Abbe 3-L Bausch&Lomb	6.1	5.9	6.2	4.9

11. PHENOLOGY: Express length of developmental stages either as calendar days or as heat units (growing degree days), in degrees Celsius. If heat units are used, indicate the base temperature used in their calculation here _____ °C. See paper by Warnock under "References" for method. Give comparative data for at least one check variety; identify checks by name or by number from table on page 1.

	APPLICATION VARIETY	Check variety VF134-1-2	Check variety VF145B-7879	Check variety UC82
Seeding to 50% flower (1 open flower on 50% of plants)	not observed			
Seed to once-over harvest *(if applicable)*	118-125 $\bar{X}$=122	122-128	125-130	118-125

[4] Fruiting season: 1 = Long ('Marglobe') 2 = Medium ('Westover') 3 = Short, concentrated ('VF 145') 4 = Very concentrated ('UC 82')

[3] Relative maturity in areas tested: 1 = Early 2 = Medium early 3 = Medium 4 = Medium late 5 = Late 6 = Variable (if relative maturity is known to differ by location or environment, please explain on separate sheet).

12. ADAPTATION: If more than one category applies, list all in rank order.

[1] Culture: 1 = Field 2 = Greenhouse

[3][4] Principal use(s): 1 = Home garden 2 = Fresh market 3 = Whole-pack canning 4 = Concentrated products 5 = Other *(Specify)* _____

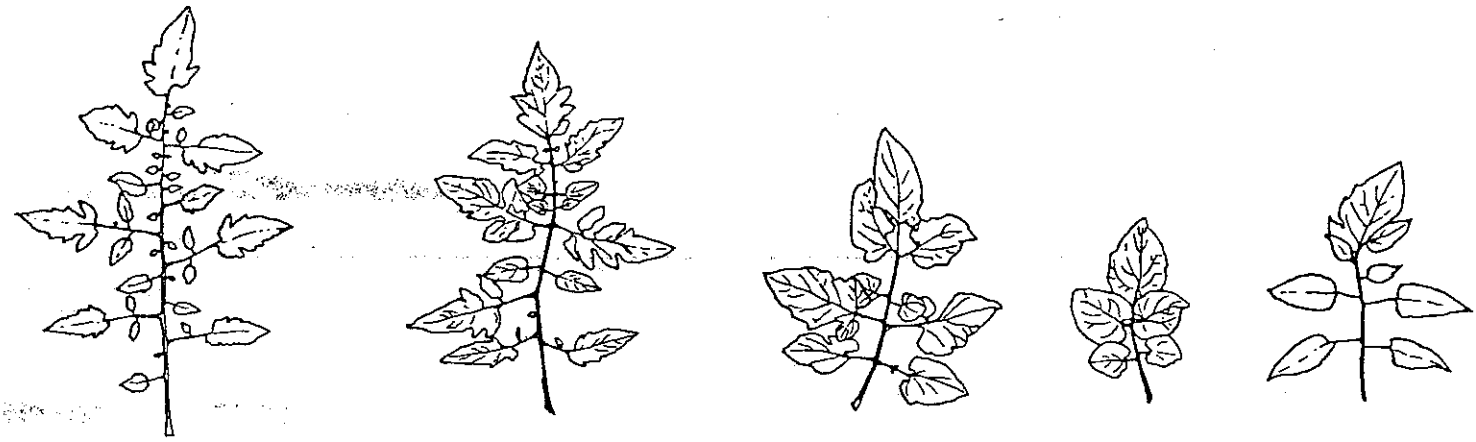
[2] Machine harvest: 1 = Not adapted 2 = Adapted

[2][9][10][11] Regions to which adaptation has been demonstrated:
1 = Northeast 2 = Mid Atlantic 3 = Southeast 4 = Florida
5 = Great Plains 6 = South-central 7 = Intermountain West 8 = Northwest
9 = California: Sacramento and Upper San Joaquin Valley
10 = California: Coastal areas 11 = California: Southern San Joaquin Valley & deserts

11

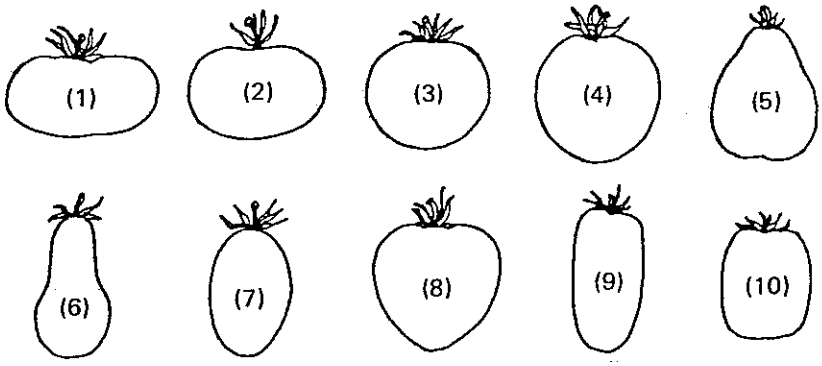
ILLUSTRATIONS OF TOMATO LEAF AND FRUIT CHARACTERISTICS

4. LEAF: Morphology:

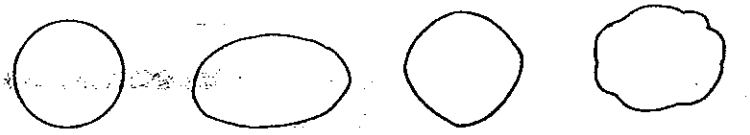


(1) (2) (3) (4) (5)

7. FRUIT: Typical fruit shape:



Shape of transverse section:

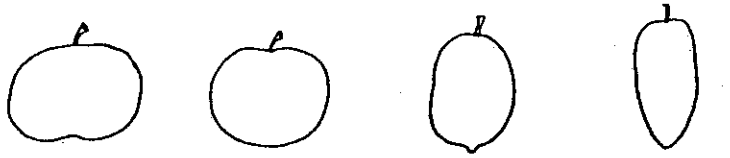


1=round 2=flattened 3=angular 4=irregular

Shape of stem end:

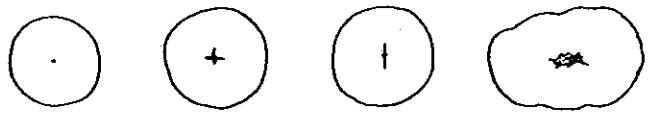
1=flat 2=indented

Shape of blossom end:



1=indented 2=flat 3=nippled 4=tapered

Shape of pistil scar:



1=dot 2=stellate 3=linear 4=irregular

REFERENCES

Anonymous, 1976. All About Tomatoes. Ortho Books, Chevron Chemical Co., San Francisco. In three volumes: Midwest/Northeast Edition, West Edition, and South Edition

Ware, G.W. & J. P. McCollum, 1968. Producing Vegetable Crops. The Interstate Printer & Publishers, Inc., Danville, Illinois. Chapter 30, pp. 451-473, "Tomatoes".

Warnock, S.J. 1978. Using Tomato Heat Units. Leaflet No. 6, Campbell Institute for Agricultural Research, Camden, NJ. 10 p.

Webb, R.E., T. H. Barksdale, & A. K. Stoner, 1973, "Tomatoes", pp. 344-361, In: Nelson, R.R. (Ed.), Breeding Plants for Disease Resistance. Pennsylvania State University Press, University Park.

Young, P.A. & J.W. MacArthur, 1947. Horticultural characters of tomatoes. Bull. Texas Agric. Exper. Station No. 698.

STATEMENT OF UNIFORMITY
EXHIBIT D

Stockseed of the F-7 and F-8 Peto 460 was tested for resistance to Fusarium Wilt Race I and Race II and Verticillium Wilt Race I and found to be homozygous resistant.

Seed lots of the F-7 and F-8 Peto 460 were found to be uniform for plant type and fruit characteristics. No unusual or off-type plants were found using standard Petoseed procedures for stockseed.

Peto 460 is a stable, uniform tomato variety.

No. 8300008

THE UNITED STATES OF AMERICA

TO ALL TO WHOM THESE PRESENTS SHALL COME:

Petoseed Co., Inc.

Whereas, THERE HAS BEEN PRESENTED TO THE

Secretary of Agriculture

AN APPLICATION REQUESTING A CERTIFICATE OF PROTECTION FOR AN ALLEGED NOVEL VARIETY OF SEXUALLY REPRODUCED PLANT, THE NAME AND DESCRIPTION OF WHICH ARE CONTAINED IN THE APPLICATION AND EXHIBITS, A COPY OF WHICH IS HEREUNTO ANNEXED AND MADE A PART HEREOF, AND THE VARIOUS REQUIREMENTS OF LAW IN SUCH CASES MADE AND PROVIDED HAVE BEEN COMPLIED WITH, AND THE TITLE THERETO IS, FROM THE RECORDS OF THE PLANT VARIETY PROTECTION OFFICE, IN THE APPLICANT(S) INDICATED IN THE SAID COPY, AND WHEREAS, UPON DUE EXAMINATION MADE, THE SAID APPLICANT(S) IS (ARE) ADJUDGED TO BE ENTITLED TO A CERTIFICATE OF PLANT VARIETY PROTECTION UNDER THE LAW.

NOW, THEREFORE, THIS CERTIFICATE OF PLANT VARIETY PROTECTION IS TO GRANT UNTO THE SAID APPLICANT(S) AND THE SUCCESSORS, HEIRS OR ASSIGNS OF THE SAID APPLICANT(S) FOR THE TERM OF eighteen YEARS FROM THE DATE OF THIS GRANT, SUBJECT TO THE PAYMENT OF THE REQUIRED FEES AND PERIODIC REPLENISHMENT OF VIABLE BASIC SEED OF THE VARIETY IN A PUBLIC REPOSITORY AS PROVIDED BY LAW, THE RIGHT TO EXCLUDE OTHERS FROM SELLING THE VARIETY, OR OFFERING IT FOR SALE, OR REPRODUCING IT, OR IMPORTING IT, OR EXPORTING IT, OR USING IT IN PRODUCING A HYBRID OR DIFFERENT VARIETY THEREFROM, TO THE EXTENT PROVIDED BY THE PLANT VARIETY PROTECTION ACT (84 STAT. 1542, AS AMENDED, 7 U.S.C. 2321 ET SEQ.)

TOMATO

'Peto 460'

In Testimony ~~Whereof~~, *I have hereunto set my hand and caused the seal of the* Plant Variety Protection Office *to be affixed at the City of* Washington *this* 26th *day of* July *in the year of our Lord one thousand nine hundred and* eighty-five.

Attest:

Kenneth R. Evans
Commissioner
Plant Variety Protection Office
Agricultural Marketing Service

John R. Block
Secretary of Agriculture

U.S. DEPARTMENT OF AGRICULTURE
AGRICULTURAL MARKETING SERVICE
LIVESTOCK, MEAT, GRAIN & SEED DIVISION

APPLICATION FOR PLANT VARIETY PROTECTION CERTIFICATE

(Instructions on reverse)

FORM APPROVED: OMB NO. 0581-0005

No certificate for plant variety protection may be issued unless a completed application form has been received (5 U.S.C. 553).

1. NAME OF APPLICANT(S)	2. TEMPORARY DESIGNATION	3. VARIETY NAME
Petoseed Co., In.	Peto 460	Peto 460

4. ADDRESS *(Street and No. or R.F.D. No., City, State, and Zip Code)*	5. PHONE *(Include area code)*
P. O. Box 4206 Saticoy, CA 93004	805-647-1188

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PVPO NUMBER: 8300008

6. GENUS AND SPECIES NAME	7. FAMILY NAME *(Botanical)*
Lycopersicum esculentum	Solanaceae

FILING
DATE: 10/27/82
TIME: 3:00 ☐ A.M. ☒ P.M.

8. KIND NAME	9. DATE OF DETERMINATION
Tomato	September 15, 1982

FEES RECEIVED
AMOUNT FOR FILING: $ 500.00
DATE: 10/27/82
AMOUNT FOR CERTIFICATE: $ 250.00
DATE: 7/9/85

10. IF THE APPLICANT NAMED IS NOT A "PERSON," GIVE FORM OF ORGANIZATION *(Corporation, partnership, association, etc.)*
corporation

11. IF INCORPORATED, GIVE STATE OF INCORPORATION
California

12. DATE OF INCORPORATION
1962

13. NAME AND ADDRESS OF APPLICANT REPRESENATIVE(S), IF ANY, TO SERVE IN THIS APPLICATION AND RECEIVE ALL PAPERS
Paul Thomas, Director of Research, Petoseed Co., Inc.
Rt.4, Box 1255
Woodland, CA 95695
916-666-0931

14. CHECK APPROPRIATE BOX FOR EACH ATTACHMENT SUBMITTED

a. ☒ Exhibit A, Origin and Breeding History of the Variety *(See Section 52 of the Plant Variety Protection Act.)*
b. ☒ Exhibit B, Novelty Statement
c. ☒ Exhibit C, Objective Description of the Variety *(Request form from Plant Variety Protection Office.)*
d. ☒ Exhibit D, Additional Description of the Variety

15. DOES THE APPLICANT(S) SPECIFY THAT SEED OF THIS VARIETY BE SOLD BY VARIETY NAME ONLY AS A CLASS OF CERTIFIED SEED? *(See Section 83(a) of the Plant Variety Protection Act.)* ☐ Yes *(If "Yes," answer items 16 and 17 below)* ☒ No

16. DOES THE APPLICANT(S) SPECIFY THAT THIS VARIETY BE LIMITED AS TO NUMBER OF GENERATIONS? ☐ Yes ☒ No

17. IF "YES" TO ITEM 16, WHICH CLASSES OF PRODUCTION BEYOND BREEDER SEED? ☐ Foundation ☐ Registered ☐ Certified

18. DID THE APPLICANT(S) FILE FOR PROTECTION OF THE VARIETY IN THE U.S. OR OTHER COUNTRIES?
☐ Yes *(If "Yes," give names of countries and dates)*
☒ No

19. HAVE RIGHTS BEEN GRANTED IN THE U.S. OR OTHER COUNTRIES?
☐ Yes *(If "Yes," give names of countries and dates)*
☒ No

20. The applicant(s) declare(s) that a viable sample of basic seeds of this variety will be furnished with the application and will be replenished upon request in accordance with such regulations as may be applicable.

The undersigned applicant(s) is (are) the owner(s) of this sexually reproduced novel plant variety, and believe(s) that the variety is distinct, uniform, and stable as required in Section 41, and is entitled to protection under the provisions of Section 42 of the Plant Variety Protection Act.

Applicant(s) is (are) informed that false representation herein can jeopardize protection and result in penalties.

SIGNATURE OF APPLICANT	DATE
Paul Thomas	10/22/82
SIGNATURE OF APPLICANT	DATE

FORM LMGS-470 (9-81) (Edition of 1-78 is obsolete)

14A ORIGIN AND BREEDING HISTORY OF PETO 460

The cultivar Peto 460 was judged to be a true breeding line with merit for processing during the fall of 1981. Peto 460 was developed by Jack Hanna with support from other research workers at the Petoseed Research Center, Woodland, California.

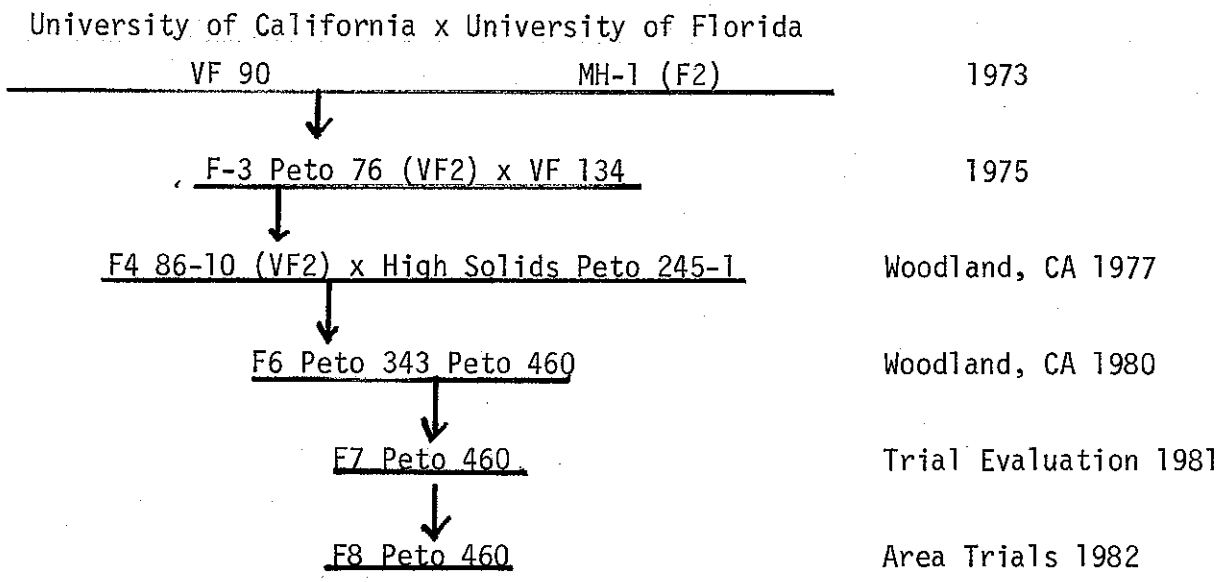
Large numbers of selections in the F-2 and following progeny from the cross $F_3$264 x 245-1 were selected for quality, including viscosity, firmness and solids. Progeny were selected for resistance to Fusarium Race II (Fusarium oxysporium f. lycopersici) and Verticillium Wilt Race I (Verticillium alboatrium). The true breeding line Peto 460 is homozygous resistant to Fusarium Race II and Verticillium Race I.

Plant characteristics were evaluated for adaptability to mechanical harvest in each generation. Plants with more ideal characteristics for mechanical harvest were saved in each generation. Trial plantings of Peto 460 during 1981 showed the cultivar to have excellent mechanical harvest characteristics. The fruit separates from the vine without excessive shaking and the firm fruit do not show mechanical damage.

Breeding work was all conducted on facilities owned and operated by Petoseed Co., Inc. in Woodland, California, Saticoy, California and Santiago, Chile.

14A ORIGIN AND BREEDING HISTORY OF PETO 460 (CONT'D.)

The basic pedigree of Peto 460 is as follows:



In 1980 a large number of single plant selections were observed and Peto 460 was determined to have outstanding solids and a very productive plant. Evaluation of Peto 460 was continued in the 1981 Petoseed trials. Fusarium Race II resistance was determined from the F-7 Peto 460 and found to be 100% resistant to Fusarium Race II. F-8 Peto 460 was planted in Petoseed controlled trials in California during 1982.

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December 15, 1982

SUBJECT: TOMATO APPLICATION NO. 8300008 - PETO 460

Addition to Exhibit A - December 15, 1982

No variation has been found in Peto 460 for off-type or other plant variation when grown under normal field conditions.

14B PETO 460

Peto 460 is a novel tomato for processing using mechanical or hand harvest.

Peto 460 most closely resembles the tomato variety VF 134-1-2. The plant habit and fruit setting characteristics of Peto 460 are similar but differe from VF 134-1-2 in that Peto 460 has more concentrated maturity under a wider range of cultural conditions.

Peto 460 is resistant to Fusarium Wilt (Fusarium oxysporium f. lycopersici) Race I and Race II and differs from VF 134-1-2, Murrieta and UC82 that have resistance to Fusarium Wilt Race I (Fusarium oxysporium f. lycopersici).

Peto 460 is a novel tomato for processing developed by conventional plant breeding methods, including the combining of parental types and subsequent selection to produce a unique combination of characteristics.

Quality studies of Peto 460 was determined by obtaining paired samples from a number of locations in California during 1982. Quality studies for color, soluble solids, pH and viscosity of pulped samples were determined.

The results of quality studies during 1982 show the following:

1. Viscosity of pulped fruit is higher than the cultivar VF 145-7879 and similar to UC 82.
2. Soluble solids is similar to VF 145-7879 and higher than UC 82, Peto 94C and Peto 95-43.
3. pH is in the acceptable range for processing and similar to the cultivars VF 145-7879 and UC 82.
4. Color of Peto 460 is very good and equal to VF 145-7879 and UC 82.
5. Fruit are firm and not cracked or broken during mechanical harvest.

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14B PETO 460 (CONT'D.)

The general field performance of Peto 460 is as follows:

1. Seedlings become rapidly established in direct seeded fields under cultural practices for mechanical harvest.
2. Fruit set of the plants produces a concentrated set of fruit for mechanical harvest with yields above the varieties VF 145-7879 and UC 82.
3. Plant characteristics including size are well adapted for mechanical harvest. The fruit are readily removed from the vine without excessive shaking and mechanical damage is very minimal.

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December 15, 1982

SUBJECT: TOMATO APPLICATION NO. 8300008 - PETO 460

Addition to Exhibit B - December 15, 1982

The disease resistance of comparison varieties are as follows:

VARIETY	FUSARIUM RACE I	FUSARIUM RACE II
VF 134-1-2	resistant	susceptible
Murrieta	resistant	susceptible
UC 82	resistant	susceptible
Peto 460	resistant	resistant

FORM APPROVED: OMB NO. 0581-0055

EXHIBIT C
(Tomato)

U.S. DEPARTMENT OF AGRICULTURE
AGRICULTURAL MARKETING SERVICE
LIVESTOCK, MEAT, GRAIN AND SEED DIVISION
PLANT VARIETY PROTECTION OFFICE
BELTSVILLE, MARYLAND 20705

OBJECTIVE DESCRIPTION OF VARIETY

TOMATO *(Lycopersicon esculentum* Mill.)

NAME OF APPLICANT(S)	TEMPORARY DESIGNATION	VARIETY NAME
Petoseed Co., Inc.	Peto 460	PETO 460 3/17/83

ADDRESS *(Street and No., or R.F.D. No., City, State, and Zip Code)*
Rt. 4, Box 1255
Woodland, CA 95695

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PVPO NUMBER

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Choose responses for the following characters which best fit your variety. Complete this form as fully as possible for best characterization of the variety. When a single quantitative value is requested (e.g., fruit weight), your answer should be the mean of an adequate-sized, unbiased sample of plants. Use leading zeroes when necessary (e.g., [0][9] or [0][8][1], etc.). The applicant variety should be compared with at least one well-known standard check variety of the same type (see list of recommended check varieties below), and grown in the same trials. The characters on this form should be described from plants grown under normal conditions of culture for the variety. Indicate by a check whether trial data are from greenhouse ____ or field XX plantings. Trials direct-seeded XX or transplanted ____; staked ____ or unstaked ____. Give locations and dates of seeding and transplanting here: April 15, 1981, Woodland, CA; April 1, 1982, May 15, 1982, June 5, 1982, Woodland, California and areas in California.

COMPARISONS SHOULD BE MADE TO ONE OR MORE CHECK VARIETIES IN THE FOLLOWING LIST, IF AT ALL POSSIBLE. ENTER THE **NUMBER** *OF THE CHECK IN BOXES WHERE IDENTITY OF CHECK IS REQUESTED.*

1 = Ace 55 VF
2 = Campbell 37
3 = Chico III
4 = Flora Dade
5 = Florida MH-1
6 = Heinz 1350
7 = Homestead 24
8 = Marglobe
9 = Murietta
10 = New Yorker
11 = Ohio MR-13
12 = Red Cherry Large
13 = Red Rock
14 = Roma VF
15 = Rutgers
16 = Sunray
17 = Tropic
18 = UC 82
19 = VF 134
20 = US 28
21 = VF 145 B 7879
22 = Other *(Specify)* ____

1. SEEDLING:

[2] Anthocyanin in hypocotyl of 2-15 cm. seedling: 1 = Absent 2 = Present

[1] Habit of 3-4 week old seedling: 1 = Normal 2 = Compact

2. MATURE PLANT (at maximum vegetative development):

[ ][3][7] Cm. Height

[2] Growth: 1 = Indeterminate 2 = Determinate

[2] Form: 1 = Lax, open 2 = Normal 3 = Compact 4 = Dwarf 5 = Brachytic

[3] Size of canopy (compared to others of similar type): 1 = Small 2 = Medium 3 = Large

[2] Habit: 1 = Sprawling (decumbent) 2 = Semi-erect 3 = Erect ('Dwarf Champion')

3. STEM:

[2] Branching: 1 = Sparse ('Brehm's Solid Red', 'Fireball') 2 = Intermediate ('Westover') 3 = Profuse ('UC 82')

[2] Branching at cotyledonary or first leafy node: 1 = Present 2 = Absent

[2] No. of nodes below the first inflorescence: 1 = 1-4 2 = 4-7 3 = 7-10 4 = 10 or more

[2] No. of nodes between early (1st - 2nd, 2nd - 3rd) inflorescences.

[0-2] No. of nodes between later-developing inflorescences.

[3] Pubescence on younger stems: 1 = Smooth (no long hairs) 2 = Sparsely hairy (scattered long hairs) 3 = Moderately hairy 4 = Densely hairy or wooly

4. LEAF (mature leaf beneath the 3rd inflorescence):

[1] Type: 1 = Tomato 2 = Potato ('Trip-L-Crop')

[2] Morphology *(choose illustration on pg. 5 of this form that is most similar)*

[2] Margins of major leaflets: 1 = Nearly entire 2 = Shallowly toothed or scalloped 3 = Deeply toothed or cut, esp. towards base

[2] Marginal rolling or wiltiness: 1 = Absent 2 = Slight 3 = Moderate 4 = Strong

[3] Onset of leaflet rolling: 1 = Early-season 2 = Mid-season 3 = Late season

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4. LEAF (mature leaf beneath the 3rd inflorescence -- continued):

[1] Surface of major leaflets: 1 = Smooth 2 = Rugose (bumpy or veiny)

[2] Pubescence: 1 = Smooth (no long hairs) 2 = Normal 3 = Hirsute 4 = Wooly

5. INFLORESCENCE (make observations on 3rd inflorescence):

[2] Type: 1 = Simple 2 = Forked (2 major axes) 3 = Compound (much branched)

[ ][7] Number of flowers in inflorescence, average

[1] Leafy or "running" inflorescences: 1 = Absent 2 = Occasional 3 = Frequent

6. FLOWER:

[1] Calyx: 1 = Normal, lobes awl-shaped 2 = Macrocalyx, lobes large, leaflike 3 = Fleshy

[2] Calyx-lobes: 1 = Shorter than corolla 2 = Approx. equalling corolla 3 = Distinctly longer than corolla

[1] Corolla color: 1 = Yellow 2 = Old gold 3 = White or tan

[2] Style pubescence: 1 = Absent 2 = Sparse 3 = Dense

[1] Anthers: 1 = All fused into tube 2 = Separating into 2 or more groups at anthesis

[1] Fasciation (1st flower of 2nd or 3rd inflorescence): 1 = Absent 2 = Occasionally present 3 = Frequently present

7. FRUIT (3rd fruit of 2nd or 3rd cluster): *For the first 5 characters below, match your variety with the most similar illustration on pg. 5 of this form.*

[10] Typical fruit shape:

[3] Shape of transverse section:

[1] Shape of stem end:

[2] Shape of blossom end:

[1] Shape of pistil scar:

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[1] Abscission layer: 1 = Present (pedicellate) 2 = Absent (jointless)

[2] Point of detachment of fruit at harvest: 1 = At pedicel joint 2 = At calyx attachment

[1][0] mm length of pedicel (from joint to calyx attachment)

[ ][6][2] mm length of mature fruit (stem axis)	[ ][6][4]	mm length, check var. no.	[1][9]
[ ][5][6] mm diameter of fruit at widest point	[ ][5][8]	mm diameter, check var. no.	[1][9]
[ ][7][3] g weight of mature fruit	[ ][7][9]	g weight, check var. no.	[1][9]

[1] No. of locules: 1 = Two 2 = Three and four 3 = Five or more (actual 2-3)

[1] Fruit surface: 1 = Smooth 2 = Slightly rough 3 = Moderately rough or ribbed

[1] Fruit base color (mature-green stage): 1 = Light green ('Lanai', 'VF145-F5') 2 = Light gray-green ('Westover') 3 = Apple or medium green ('Heinz 1439 VF') 4 = Yellow green 5 = Dark green

[1] Fruit pattern (mature-green stage): 1 = Uniform green 2 = Green-shouldered 3 = Radial stripes on sides of fruit

[ ] Shoulder color if different from base: 1 = Dark green 2 = Grey green 3 = Yellow green

[5] Fruit color, full-ripe: 1 = White 2 = Yellow 3 = Orange 4 = Pink 5 = Red 6 = Brownish 7 = Greenish 8 = Other *(Specify)* _____

[3] Flesh color, full-ripe: 1 = Yellow 2 = Pink 3 = Red/Crimson 4 = Orange 5 = Other *(Specify)* _____

[1] Flesh color: 1 = Uniform 2 = With lighter and darker areas in walls

[3] Locular gel color of table-ripe fruit: 1 = Green 2 = Yellow 3 = Red

[2] Ripening: 1 = Blossom-to-stem end 2 = Uniform

7. FRUIT (3rd fruit of 2nd or 3rd cluster): Continued

[2] Ripening: 1 = Inside out 2 = Uniformly 3 = Outside in

[2] Epidermis color: 1 = Colorless 2 = Yellow

[1] Epidermis: 1 = Normal 2 = Easy-peel

[2] Epidermis texture: 1 = Tender 2 = Average 3 = Tough

[3] Thickness of pericarp . . . . . [3]

1 = Under 3 mm 2 = 3-6 mm 3 = 6-9 mm 4 = Over 9 mm

Thickness of pericarp, check var. no. [1][9]

[1] Stem scar size: 1 = Small ('Roma') 2 = Medium ('Rutgers') 3 = Large

[1] Core: 1 = Coreless (absent or smaller than 6x6 mm) 2 = Present

8. RESISTANCE TO FRUIT DISORDERS (Use code: 0 = Unknown, 1 = Susceptible, 2 = Resistant)

[0] Blossom end rot
[0] Blotchy ripening
[2] Bursting
[2] Catface
[2] Cracking, concentric
[2] Cracking, radial
[0] Fruit pox
[0] Gold fleck
[0] Graywall
[2] Zippering
[ ] Other *(Specify)* _____

9. DISEASE AND PEST REACTION (Use code: 0 = Not tested, 1 = Susceptible, 2 = Resistant). NOTE: If claim of novelty is based wholly or in substantia part upon disease resistance, trial data should be appended. These should specify the method of testing, the reaction of the application variety, and reaction of well-known check varieties grown in the trial (identified by name).

VIRAL DISEASES:

[0] Cucumber mosaic
[0] Curly top
[0] Potato-Y virus
[ ] Other virus *(Specify)* _____
[1] Tobacco mosaic, Race 0
[1] Tobacco mosaic, Race 1
[1] Tobacco mosaic, Race 2
[1] Tobacco mosaic, Race 2^2
[0] Tomato spotted wilt
[0] Tomato yellows

BACTERIAL DISEASES:

[0] Bacterial canker *(Corynebacterium michiganense)*
[0] Bacterial soft rot *(Erwinia carotovora)*
[1] Bacterial speck *(Pseudomonas tomato)*
[1] Bacterial spot *(Xanthomonas vesicatorium)*
[0] Bacterial wilt, *(Pseudomonas solanacearum)*
[0] Other bacterial disease *(Specify)* _____

FUNGAL DISEASES:

[0] Anthracnose *(Colletotrichum* spp.*)*
[0] Brown root rot or corky root, *(Pyrenochaeta lycopersici)*
[0] Collar rot or stem canker, *(Alternaria solani)*
[0] Early blight defoliation, *(Alternaria solani)*
[2] Fusarium wilt, Race 1, *(F. oxysporum f. lycopersici)*
[2] Fusarium wilt, Race 2
[0] Fusarium wilt, Race 3
[0] Gray leaf spot *(Stemphylium* spp.*)*
[0] Late blight, Race 0, *(Phytophthora infestans)*
[0] Late blight, Race 1
[0] Leaf mold, Race 1 *(Cladosporium fulvum)*
[0] Leaf mold, Race 2
[0] Leaf mold, Race 3
[0] Leaf mold, other races *(Specify)* _____
[0] Nailhead spot *(Alternaria tomato)*
[0] Septoria leafspot *(S. lycopersici)*
[0] Target leafspot *(Corynespora casiicola)*
[2] Verticillium wilt, Race 1 *(V. albo-atrum)*
[0] Verticillium wilt, Race 2
[0] Other fungal disease _____
[0] Other fungal disease _____

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9. DISEASE AND PEST REACTION (Use code: 0 = Not tested, 1 = Susceptible, 2 = Resistant -- Continued)

INSECTS AND PESTS:

[0]	Colorado potato beetle *(Leptinotarsa decemlineata)*	[0]	Tomato hornworm *(Manduca quinquemaculata)*
[0]	Southern root knot nematode *(Meloidogyne incognita)*	[0]	Tomato fruitworm *(Heliothis zea)*
[0]	Spider mites *(Tetranychus spp.)*	[0]	Whitefly *(Trialeurodes vaporariorum)*
[0]	Sugar beet army worm *(Spodoptera exigua)*	[0]	Other *(Specify)* _____
[0]	Tobacco flea beetle *(Epitrix hirtipennis)*		

POLLUTANTS:

[0]	Ozone	[0]	Sulfur dioxide	[0]	Other *(Specify)* _____

10. CHEMISTRY AND COMPOSITION OF FULL-RIPE FRUITS: Suggested test methods may be found in "Tomato Products," 5th ed., National Canners Assn. Bull. 27-L. Please specify test methods or give a reference to methods used. Fill in table below with values for the new variety and for at least one well-known check variety of similar type grown in the same trial. Specify names or numbers of check varieties.

	SUBMITTED VARIETY	Check Variety VF134-1-2	Check Variety VF145B-7879	Check Variety UC82
pH Orion Analog pH Model 1301	4.25	4.15	4.25	4.25
Titratable acidity, as % citric	not tested			
Total solids (dry matter, seeds and skin removed)	not tested			
Soluble solids, as °Brix Abbe 3-L Bausch&Lomb	6.1	5.9	6.2	4.9

11. PHENOLOGY: Express length of developmental stages either as calendar days or as heat units (growing degree days), in degrees Celsius. If heat units are used, indicate the base temperature used in their calculation here _____ °C. See paper by Warnock under "References" for method. Give comparative data for at least one check variety; identify checks by name or by number from table on page 1.

	APPLICATION VARIETY	Check variety VF134-1-2	Check variety VF145B-7879	Check variety UC82
Seeding to 50% flower (1 open flower on 50% of plants)	not observed			
Seed to once-over harvest *(if applicable)*	118-125 $\bar{x}$=122	122-128	125-130	118-125

[4] Fruiting season: 1 = Long ('Marglobe') 2 = Medium ('Westover') 3 = Short, concentrated ('VF 145') 4 = Very concentrated ('UC 82')

[3] Relative maturity in areas tested: 1 = Early 2 = Medium early 3 = Medium 4 = Medium late 5 = Late 6 = Variable (if relative maturity is known to differ by location or environment, please explain on separate sheet).

12. ADAPTATION: If more than one category applies, list all in rank order.

[ ][1] Culture: 1 = Field 2 = Greenhouse

[ ][ ][3][4] Principal use(s): 1 = Home garden 2 = Fresh market 3 = Whole-pack canning 4 = Concentrated products 5 = Other *(Specify)* _____

[2] Machine harvest: 1 = Not adapted 2 = Adapted

[2][9][10][11] Regions to which adaptation has been demonstrated:
1 = Northeast 2 = Mid Atlantic 3 = Southeast 4 = Florida
5 = Great Plains 6 = South-central 7 = Intermountain West 8 = Northwest
9 = California: Sacramento and Upper San Joaquin Valley
10 = California: Coastal areas 11 = California: Southern San Joaquin Valley & deserts

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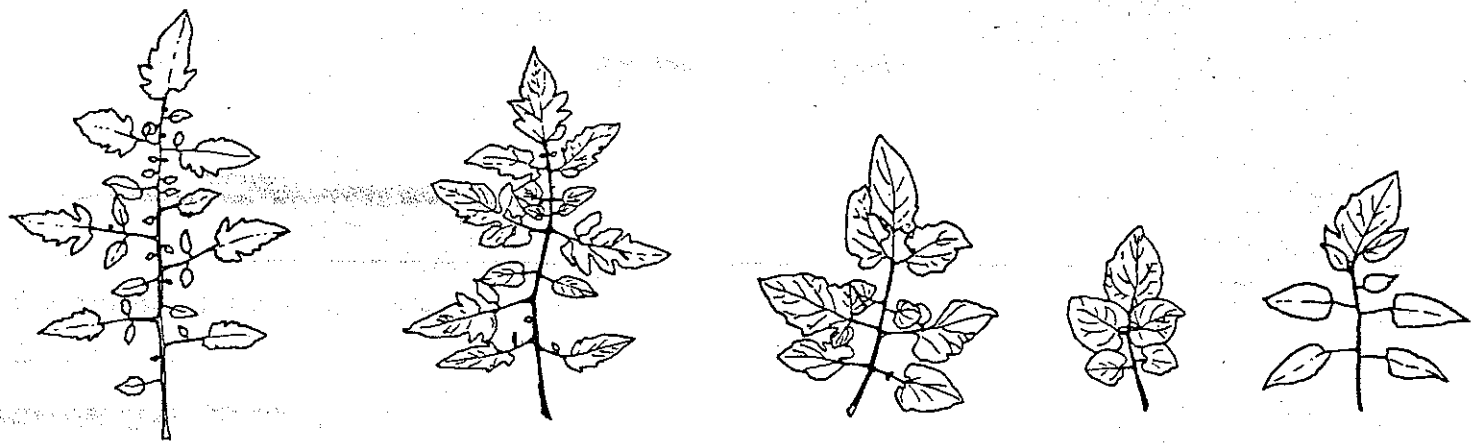
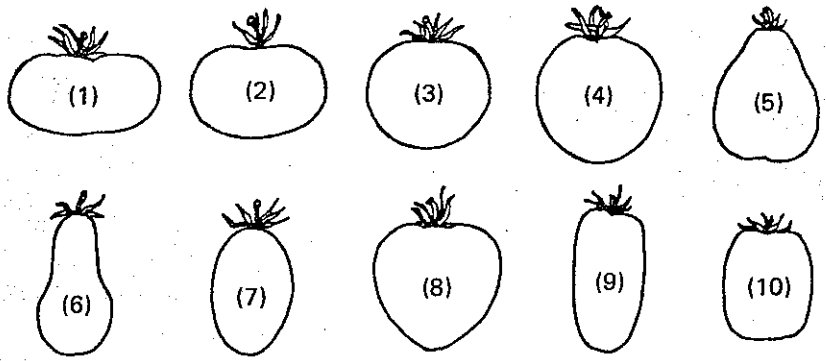
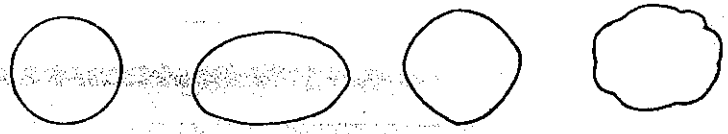
4. LEAF: Morphology:



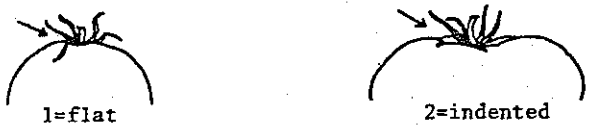
7. FRUIT: Typical fruit shape:



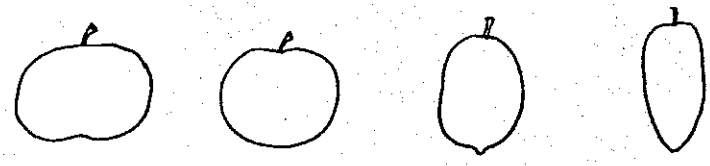
Shape of transverse section:



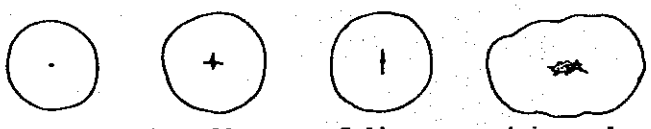
Shape of stem end:



Shape of blossom end:



Shape of pistil scar:



REFERENCES

Anonymous, 1976. All About Tomatoes. Ortho Books, Chevron Chemical Co., San Francisco. In three volumes: Midwest/Northeast Edition, West Edition, and South Edition

Ware, G.W. & J. P. McCollum, 1968. Producing Vegetable Crops. The Interstate Printer & Publishers, Inc., Danville, Illinois. Chapter 30, pp. 451-473, "Tomatoes".

Warnock, S.J. 1978. Using Tomato Heat Units. Leaflet No. 6, Campbell Institute for Agricultural Research, Camden, NJ. 10 p.

Webb, R.E., T. H. Barksdale, & A. K. Stoner, 1973, "Tomatoes", pp. 344-361, In: Nelson, R.R. (Ed.), Breeding Plants for Disease Resistance. Pennsylvania State University Press, University Park.

Young, P.A. & J.W. MacArthur, 1947. Horticultural characters of tomatoes. Bull. Texas Agric. Exper. Station No. 698.

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STATEMENT OF UNIFORMITY
EXHIBIT D

Stockseed of the F-7 and F-8 Peto 460 was tested for resistance to Fusarium Wilt Race I and Race II and Verticillium Wilt Race I and found to be homozygous resistant.

Seed lots of the F-7 and F-8 Peto 460 were found to be uniform for plant type and fruit characteristics. No unusual or off-type plants were found using standard Petoseed procedures for stockseed.

Peto 460 is a stable, uniform tomato variety.